

Feb 25 1899

24

110

Inaugural Dissertation  
Prop. Anno. 1829  
on  
Digestion.

Submitted for the degree of A.D.  
in the University of Pennsylvania,

by

Horatio N. Lewis

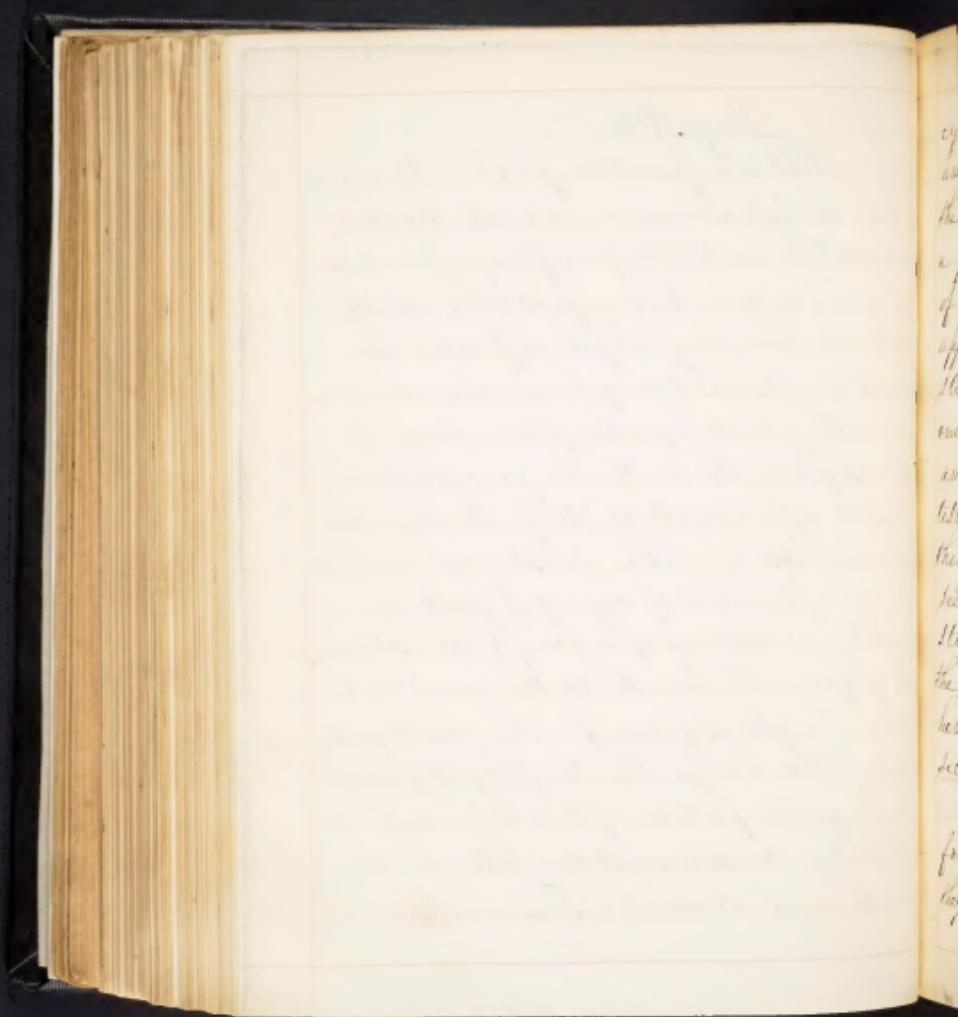
Pennsylvania.

Feb. 24th. 1829

4  
at  
in  
be  
for  
ed  
dis  
th  
of  
in  
pla  
dis  
the  
that  
the  
tut  
me

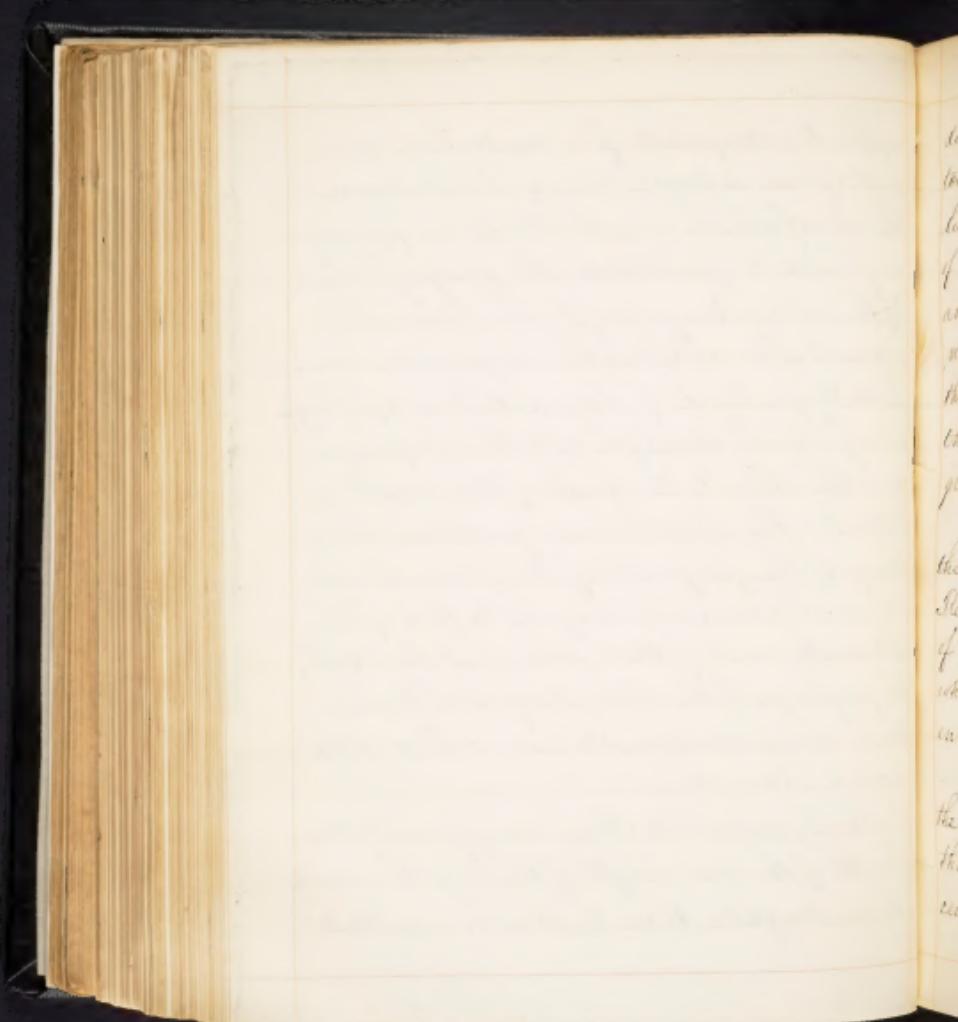
## Digestion.

This is a function peculiar to organized bodies, the warm and red-blooded animals the nutritive process is performed as in man, and in that respect there exists, between them very slight differences. The series of assimilative phenomena commences in the plant by absorption, since it draws from the earth the juices which it is to appropriate to itself. In man the assimilation of ateble substances develops in an apparatus of organs of great complexity, consisting of a long tube extending from the mouth to the anus and whose length is from five to six times that of the body. The oesophagus forms the superior portion of this tube and establishes a communication between the mouth and stomach. It is a hollow



cylinder composed of a muscular tunic and of an internal mucous membrane the use of which is restricted to supplying a fluid to facilitate the propagation of the alimentary mass. The Stomach appears as a considerable expansion constituting a kind of bag with two openings one of which corresponds to the oesophagus and the other to the first of the small intestines. The Duodenum preserves something of the properties of the stomach. We see in it a curve analogous to that of the stomach and fitted somewhat to retard the passage of the alimentary substances, hence some anatomists have called it the second stomach.

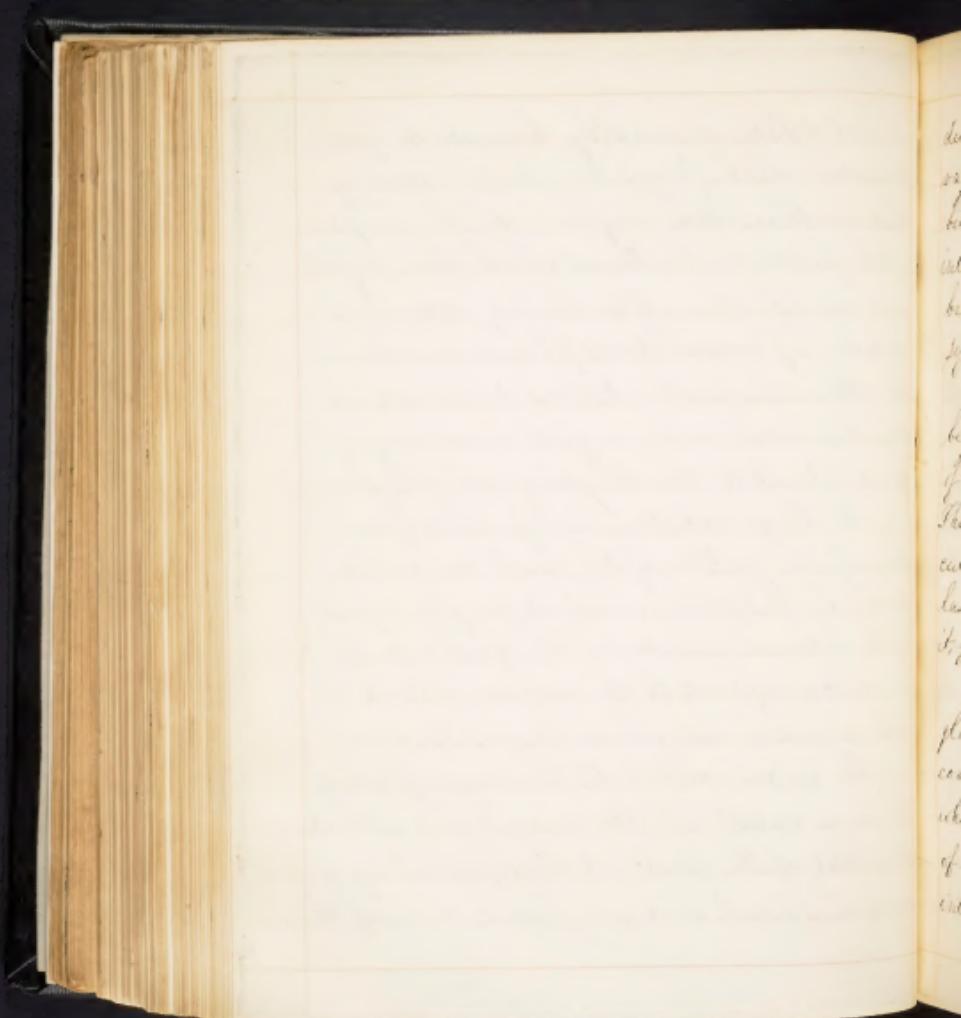
The Spleen and Liver occupy nearly three fourths of the whole length of the digestive canal; they are straighter than the duodenum and



do not dilate so readily, because the peritoneum which forms their outer covering lies over their whole surface with the exception of the posterior border, at which their vessels and nerves enter. After having described a number of convolutions placed one above the other, the small intestines terminate at the Ileo-coccal valve, a fresh narrowing of great interest to the Physiological Physician,

The large intestine is separated from the inferior portion of the small one, called Ileum, by this valve which is simply a fold of the internal membrane, the free border of which corresponds to the cecum, a kind of enlargement or sac, whence begins the Colon.

The Colon constituted the major part of the large intestines. Its mucous coat is thicker than that of the small intestines, partaking of cubical, spiral and ganglionic nerves of the



duodenum, stomach, kidneys, bladder and  
vagina, must be endowed with more sensi-  
tivity than the floating portion of the small  
intestine, which only communicates with the  
brain by the small cords that connect the great  
sympathetic with that organ.

The digestive canal, properly so called  
begins at the superior or Cardiac orifice  
of the Stomach, and terminates at the Anus.  
The parieties of the digestive tube are mus-  
cular, a mucous coat lines its inside, and  
lastly a serous or peritoneal is reflected over  
it, forming an external covering.

The Mucous tissue exhibits follicles or  
glands placed between it and the muscular  
coat, the use of which is to secrete a fluid  
which passes through that membrane by means  
of excretory ducts, and lubricates the smooth  
interior of the digestive canal.

la  
fa  
10  
et  
ma

tre  
Pa  
Ka  
li

St  
vi  
in  
pla  
len  
be  
lo  
tot

Sp  
car

the circular end is a distinct a  
long hollow muscle formed by two layers  
joined the one set complete round & the other  
circular. This is not necessary, & it is now  
reduced to a simple ligament.

After this we had views of the digestive  
organs & we then turned to the poor Silky.  
The alimentary tube is covered the forenoon in  
Rosa subtilissima which grows scattered upon it.  
The greater part are being minute &  
disseminated by the wind & quenched those  
with a filigree in the hollow tube outside  
at old Shire of the river, upon sand and sandy  
gravel. The rest are said to be from the  
water or shallow pools of the river being  
the winter & fallow, in a right orderly  
the stamping which it is called by a legend  
is not to be found in any part of the river  
or in the sea. It is said that it is the mess

170

100

卷之三

100

670

47

37

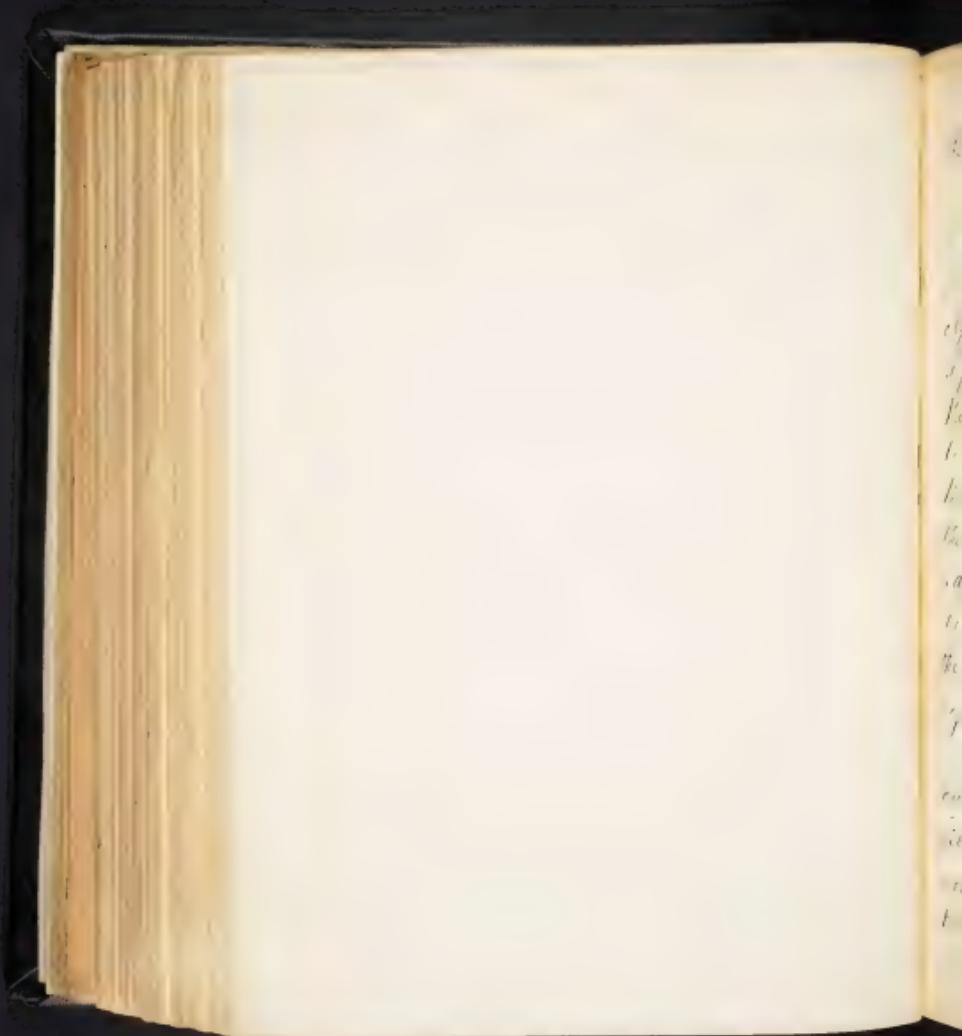
jet to pass the upper part of the  
stomach & then go into the small  
second division.

The food on passing the stomach  
leaves the duodenum, and then passes into  
the first part of the small intestine which is open to  
the air upon its upper portion in the Jejunum. The  
intestine is provided on the periphery of the two  
curves with distinct & by the name of gran-  
ulated to be called villi, & these by the name of  
microvilli. The peristaltic motion contracts and  
expels the air to force along the nutritive fluid  
to the "intestines" "stomach" "abdomen". The cy-  
lic and sapient air being sent into the "intestines"  
comes from the "abdomen" & "stomach" changing  
before entering the "intestines" by passing through  
the fluid of the peritoneal cavity, & with  
the air in the peritoneal cavity.

The combination of the nutritive fluid



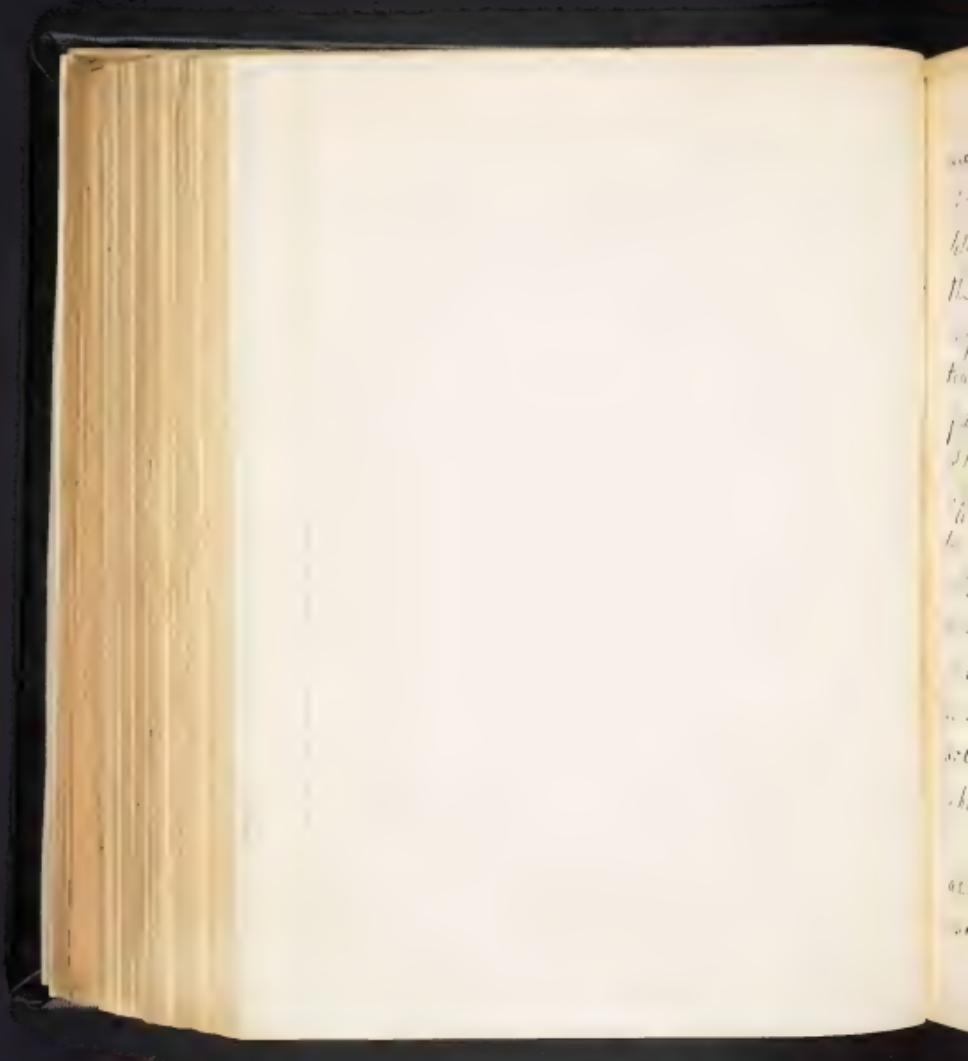
and killing you'd do by the Accidencem  
and for it. the 1<sup>st</sup> is a yellowish, & the  
2<sup>nd</sup> a blackish, & the 3<sup>rd</sup> the ordinary one the  
4<sup>th</sup> is the purple or nightshade which  
was such a disease. Here the bile will  
be dry & coarse, the skin bitter and cold  
and portion puffed along with the accidencem  
muddy hum and puffed to them the skin  
dilating & swelling & going to with the action  
of the digestion like a flatulence and all  
most pernicious running with the chyle, hence  
incorporeal & other it, are obstructed all of them  
it and puffed into the circumference. We may  
see notice in the skin being rough, the  
hair dry & yellowish. This combination has very  
dissimil parts the one is a whitish milky  
substance which swells to the size of a pea. The  
other is a yellowish <sup>purple</sup> like the digestion  
itself & though it is not easy to distinguish the



the value of the root.

The antennular rays have a terminal  
in the structure and to a height of two  
and many transversely intersecting parts of  
the ciliated and extromititious parts of the  
figurines and stems. The style proboscis  
the upper surface of a white, pale, scarred  
to the lower surface of the rays, passing  
through the interstices of the ciliated tufts  
the several membranes to which I thought  
adhered this membrane abides it like a  
ring of sponge and extends it to such  
the ciliated and extromititious ciliated tufts  
cysts.

The style is also built up of a great  
number on the surface of the cilia are  
ciliated which are circular of the  
membrane and there is at a greater dis-  
tance from each other the membranes



are to the termination of the Stomach, by  
having traversed the long course of the in-  
testinal & procto-rectal digestives. If evaded  
the ilio-coccal valve thus it is of course  
very difficult to recover, and gives  
time for a long time to deprive it of the major  
part of it, to which is related the lowest  
is then for steadily peristaltic, and when  
effected the matter has either in the state of  
looseness, still it is before the time  
of coition and the ascending and trans-  
verse portions of the colon, and is much  
more liable in the sigmoid flexion, are when  
accustomed in the rectum to solicit the  
act of defecation, it pushes off the appearance  
which we see after it has

The fluids associated with the cystic  
and taken up by the lymphatics of the  
intestinal tube before the rectal valve



extracted from the solid aliment, and  
serve it as a vehicle.

When they have reached the mass of  
the blood, they increase its quantity, diminish  
its viscosity, and render it more  
fluid, going along with it throughout the  
whole course of the circulation, supplying  
moisture to all parts of the body, they  
become loaded with molecules detached  
from them by the vital motion. They  
conveyed to the urinary organs, they become  
disengaged from the rest of the fluids,  
carrying along with them a number of  
products of every kind which by a lon-  
ger stay in the animal economy would  
occasion a manifest disturbance in the  
exercise of the functions.

